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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/611,786

06/30/2003

Jeremy L. Rover

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EXAMINER

NGUYEN, THUONG

ART UNIT

PAPER NUMBER

2155

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/611,786	<b>Applicant(s)</b> ROVER ET AL.	
	<b>Examiner</b> Thuong (Tina) T. Nguyen	<b>Art Unit</b> 2155	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/21/08</u> .   | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This communication is responsive to application 10/611,786 the amendment filed on 7/30/08. Claims 1-22 are pending and represent system and method for the design and description of networks.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-9, 11-13, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon, Patent No. 2003/0112808 A1 in view of Kulkarni, Patent No. 5,848,243.

Solomon teaches the invention substantially as claimed including automatic configuration of IP tunnels (see abstract).

4. As to claim 1, Solomon teaches a method for describing a network comprising:  
programmatically categorizing a subnet into a subnet grouping based, at least in part, on whether the subnet is an internal subnet or an external subnet, wherein the internal subnet is associated with a secure interface of a firewall and the external subnet is associated with a non-secure interface of a firewall (figure 5; page 6, paragraph 83-

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84; page 7, paragraph 86; Solomon discloses that the method of define the internal subnet which connected to the gateway and the external subnet is the remote subnet), wherein subnets within a subnet grouping can route to one another (figure 1 & 5; page 1, paragraph 5-6; page 7, paragraph 91; Solomon discloses that the method of classified the subnets into different groups);

providing a subnet subsection for the subnet within the categorized subnet grouping (figure 3; page 2, paragraph 9; page 7, paragraph 86; Solomon discloses that the method of listing the routing information for each group of subnets);

specifying a network topology type in the provided subnet subsection (page 3, paragraph 23; page 8, paragraph 93; Solomon discloses that the method of mapping the topology to the specific subnets or hosts).

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But Solomon failed to teach the claim limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet; and providing a network configuration request, the network configuration request including the subnet subsection and the network topology type, wherein the network configuration request specifies a requested configuration for the network.

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However, Kulkarni teaches network topology management system through a database of managed network resources including logical topologies (see abstract).

Kulkarni teaches the limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet (figure 5A & 6A; col 3, lines 50-65; col 4, lines 50—col 5, lines 10); and providing a network configuration request, the network configuration request including the subnet subsection and the network topology type.

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wherein the network configuration request specifies a requested configuration for the network (col 6, lines 61 – col 7, lines 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Solomon in view of Kulkarni so that the system would be able to create and manage the network topology in the system. One would be motivated to do so to create tools for maintaining data relating to the physical and logical topology of a network.

5. As to claim 5, Solomon and Kulkarni teach the method as recited in claim 1, wherein providing a list of nodes, the list including at least one node (page 3, paragraph 21; page 8, paragraph 95; Solomon discloses that the method of listing of all the subnets and addresses corresponding to the table).

6. As to claim 6, Solomon and Kulkarni teach the method as recited in claim 5, wherein providing the list of nodes further comprises providing a starting position on the network for the listed node (figure 1), wherein the starting position indicates a local area network associated with the listed node (figure 4).

7. As to claim 7, Solomon and Kulkarni teach the method as recited in claim 5, wherein providing the list of nodes comprises providing the list of nodes within the specified network topology type subsection (figure 4; page 8, paragraph 94; Solomon discloses that the method of mapping the listing of the subnets with the topology).

8. As to claim 8, Solomon and Kulkarni teach the method as recited in claim 1, wherein categorizing the subnet into a subnet grouping comprises categorizing the subnet into an internal subnet grouping or an external subnet grouping (page 3,

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paragraph 23; Solomon discloses that the method of mapping table of all the external subnets within the network).

9. As to claim 9, Solomon and Kulkarni teach the method as recited in claim 8, comprises:

placing the subnet in the external subnet grouping, if the subnet is associated with an external interface of a Virtual Private Network (VPN) (page 2, paragraph 10; Solomon discloses that the method of using the VPN to control the access and encryption); and

placing the subnet in the internal subnet grouping, if subnet is associated with an internal interface of the VPN (page 2, paragraph 11; Solomon discloses that the method of configuring the VPN and the tunnels for the system).

10. As to claim 11, Solomon teaches a network comprising:

a first network component to receive a request for a network configuration figure 4 & 7); and

a second network component in electrical communication with the first network component to provide the request for the network configuration, the second network component having a processor and logic executable thereon to

programmatically categorize a subnet into a subnet grouping based, at least in part, on whether the subnet is an internal subnet or an external subnet, wherein the internal subnet is associated with a secure interface of a firewall and the external subnet is associated with a non-secure interface of a firewall (figure 5; page 6, paragraph 83-84; page 7, paragraph 86; Solomon discloses that the network of define the internal

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subnet which connected to the gateway and the external subnet is the remote subnet), wherein subnets within a subnet grouping can route to one another (figure 1 & 5; page 1, paragraph 5-6; page 7, paragraph 91; Solomon discloses that the network of classified the subnets into different groups);

provide a subnet subsection for the subnet within the categorized subnet grouping (figure 3; page 2, paragraph 9; page 7, paragraph 86; Solomon discloses that the network of listing the routing information for each group of subnets);

specify a network topology type in the provided subnet subsection (page 3, paragraph 23; page 8, paragraph 93; Solomon discloses that the network of mapping the topology to the specific subnets or hosts).

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But Solomon failed to teach the claim limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet; and provide a network configuration request, the network configuration request including the subnet subsection and the network topology type, wherein the network configuration request specifies a requested configuration for the network.

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However, Kulkarni teaches the limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet (figure 5A & 6A; col 3, lines 50-65; col 4, lines 50—col 5, lines 10); and provide a network configuration request, the network configuration request including the subnet subsection and the network topology type, wherein the network configuration request specifies a requested configuration for the network (col 6, lines 61 – col 7, lines 7).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Solomon in view of Kulkarni so that the system would be able to create and manage the network topology in the system. One would be motivated to do so to create tools for maintaining data relating to the physical and logical topology of a network.

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11. As to claim 12, Solomon and Kulkarni teach the network as recited in claim 11, wherein the second network component having the processor and logic executable thereon further comprises logic executable thereon to: provide a list of nodes, the list including at least one node (page 3, paragraph 21; page 8, paragraph 95; Solomon discloses that the network of listing of all the subnets and addresses corresponding to the table).

12. As to claim 13, Solomon and Kulkarni teach the network as recited in claim 12, wherein to provide the list of nodes comprises to provide the list of nodes within the specified network topology type subsection (figure 4; page 8, paragraph 94; Solomon discloses that the network of mapping the listing of the subnets with the topology).

13. As to claim 15, Solomon and Kulkarni teach the network as recited in claim 11, wherein the second network component is a control node (page 3, paragraph 25; Solomon discloses that the network of listing all the list of active nodes and remote nodes for controlling the packet transmission).

14. As to claim 16, Solomon teaches an article of manufacture comprising:  
programmatically categorize a subnet into a subnet grouping based, at least in part, on whether the subnet is an internal subnet or an external subnet, wherein the



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internal subnet is associated with a secure interface of a firewall and the external subnet is associated with a non-secure interface of a firewall (figure 5; page 6, paragraph 83-84; page 7, paragraph 86; Solomon discloses that the article of define the internal subnet which connected to the gateway and the external subnet is the remote subnet), wherein subnets within a subnet grouping can route to one another (figure 1 & 5; page 1, paragraph 5-6; page 7, paragraph 91; Solomon discloses that the article of classified the subnets into different groups);

provide a subnet subsection for the subnet within the categorized subnet grouping (figure 3; page 2, paragraph 9; page 7, paragraph 86; Solomon discloses that the article of listing the routing information for each group of subnets);

specify a network topology type in the provided subnet subsection (page 3, paragraph 23; page 8, paragraph 93; Solomon discloses that the article of mapping the topology to the specific subnets or hosts).

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But Solomon failed to teach the claim limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet; and provide a network configuration request, the network configuration request including the subnet subsection and the network topology type, wherein the network configuration request specifies a requested configuration for the network.

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However, Kulkarni teaches the limitation wherein the network topology type to indicate a network topology that is to be supported by the subnet (figure 5A & 6A; col 3, lines 50-65; col 4, lines 50—col 5, lines 10); and provide a network configuration request, the network configuration request including the subnet subsection and the

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network topology type, wherein the network configuration request specifies a requested configuration for the network (col 6, lines 61 – col 7, lines 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Solomon in view of Kulkarni so that the system would be able to create and manage the network topology in the system. One would be motivated to do so to create tools for maintaining data relating to the physical and logical topology of a network.

15. As to claim 17, Solomon and Kulkarni teach the article of manufacture as recited in claim 16, wherein provide a list of nodes, the list to include at least one node (page 3, paragraph 21; page 8, paragraph 95; Solomon discloses that the article of listing of all the subnets and addresses corresponding to the table).

16. As to claim 18, Solomon and Kulkarni teach the article of manufacture as recited in claim 17, wherein the electronically accessible medium providing instructions, that, when executed by the apparatus, cause the apparatus to provide a list of nodes cause the apparatus to provide the list of nodes within the specified network topology type subsection (figure 4; page 8, paragraph 94; Solomon discloses that the article of mapping the listing of the subnets with the topology).

17. As to claim 19, Solomon and Kulkarni teach the article of manufacture as recited in claim 17, wherein the electronically accessible medium providing instructions that, when executed by the apparatus, cause the apparatus to provide the list of nodes, the list to include at least one node, cause the apparatus to provide a start position on the

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network for the listed node (figure 1), wherein the start point indicates a local area network associated with the listed node (figure 4).

18. As to claim 20, Solomon and Kulkarni teach the article of manufacture as recited in claim 17, wherein the electronically accessible medium providing instructions that, when executed by the apparatus, cause the apparatus to categorize the subnet into a subnet grouping, cause the apparatus to categorize the subnet into an internal subnet grouping or an external subnet grouping (page 3, paragraph 23; Solomon discloses that the article of mapping table of all the external subnets within the network).

19. As to claim 21, Solomon and Kulkarni teach the article of manufacture as recited in claim 16, wherein:

place the subnet in the external subnet grouping, if the subnet is associated with an external interface of a Virtual Private Network (VPN) (page 2, paragraph 10; Solomon discloses that the article of using the VPN to control the access and encryption); and

place the subnet in the internal subnet grouping, if subnet is associated with an internal interface of the VPN (page 2, paragraph 11; Solomon discloses that the article of configuring the VPN and the tunnels for the system).

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20. Claims 2-4, 10, 14, & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon, Patent No. 2003/0112808 A1 in view of Kulkarni, Patent No. 5,848,243, and further in view of Hoskins, Patent No. 2003/0106067 A1.

Solomon teaches the invention substantially as claimed including automatic configuration of IP tunnels (see abstract).

21. As to claim 2, Solomon and Kulkarni teach the method as recited in claim 1. But Solomon and Kulkarni failed to teach the claim limitation wherein specifying the network topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.3 standard.

However, Hoskins teaches integrated Internet protocol (IP) gateway services in an RF cable network (see abstract). Hoskins teaches the limitation wherein specifying the network topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.3 standard (page 13, paragraph 109).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system would be able to develop some wireless local area network. One would be motivated to do so to define several different physical layers including frequency hopping and baseline.

22. As to claim 3, Solomon and Kulkarni teach the method as recited in claim 1. But Solomon and Kulkarni failed to teach the claim limitation wherein specifying the network

topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.11a standard.

However, Hoskins teaches the limitation wherein specifying the network topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.11a standard (page 12, paragraph 100).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system would be able to develop some wireless local area network. One would be motivated to do so to define several different physical layers including frequency hopping and baseline.

23. As to claim 4, Solomon and Kulkarni teach the method as recited in claim 1. But Solomon and Kulkarni failed to teach the claim limitation wherein specifying the network topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.11b standard.

However, Hoskins teaches the limitation wherein specifying the network topology type section for the established subnet subsection comprises: specifying that the subnet is to be supported by a topology that is compliant with the IEEE 802.11b standard (page 12, paragraph 100).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system would be able to develop some wireless local area network. One would be motivated to do so to define several different physical layers including frequency hopping and baseline.

24. As to claim 10, Solomon and Kulkarni teach the method as recited in claim 8. But Solomon and Kulkarni failed to teach the claim limitation wherein placing the subnet in the external subnet grouping (page 2, paragraph 10), if the subnet is to be associated with a non-secure interface of a firewall; and placing the subnet in the internal subnet grouping (page 2, paragraph 10), if the subnet is to be associated with a non-secure interface of a firewall.

However, Hoskins teaches the limitation wherein placing the subnet in the external subnet grouping, if the subnet is to be associated with a non-secure interface of a firewall; and placing the subnet in the internal subnet grouping, if the subnet is to be associated with a non-secure interface of a firewall (page 25, paragraph 195).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system to ensure the non-secure interface for the firewall. One would be motivated to do so to increase the security for the network.

25. As to claim 14, Solomon and Kulkarni teach the network as recited in claim 11. But Solomon and Kulkarni failed to teach the claim limitation wherein the first network component is a Dynamic Host configuration Protocol (DHCP) server.

However, Hoskins teaches the limitation wherein the first network component is a Dynamic Host configuration Protocol (DHCP) server (page 25, paragraph 195).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system automatically assigns temporary IP address. One would be motivated to do so to eliminate having to manually assign static IP addresses.

26. As to claim 22, Solomon and Kulkarni teach the article of manufacture as recited in claim 16. But Solomon and Kulkarni failed to teach the claim limitation wherein place the subnet in the external subnet grouping (page 2, paragraph 10), if the subnet is associated with a non-secure interface of a firewall; and place the subnet in the internal subnet grouping (page 2, paragraph 10), if the subnet is associated with a secure interface of a firewall.

However, Hoskins teaches the limitation wherein place the subnet in the external subnet grouping, if the subnet is associated with a non-secure interface of a firewall; and place the subnet in the internal subnet grouping, if the subnet is associated with a secure interface of a firewall (page 25, paragraph 195).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Solomon and Kulkarni in view of Hoskins so that the system to ensure the non-secure interface for the firewall. One would be motivated to do so to increase the security for the network.

***Response to Arguments***

Applicant's arguments with respect to claims 1 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments include the failure of previously applied art to expressly disclose specifying a network topology type in the... network topology that is to be supported by the subnet (see Applicant's response, 7/30/08, page 10, paragraph 4). It is evident from the detailed mappings found in the above rejection(s) that Kulkarni disclosed this functionality (see Kulkarni, figure 5A & 6A; col 3, lines 50-65; col 4, lines 50—col 5, lines 10). Further, it is clear from the numerous teachings (previously and currently cited) that the provision for the network topology type to indicate a network topology that is to be supported by the subnet was widely implemented in the networking art. Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina Nguyen whose telephone number is 571-272-3864, and the fax number is 571-273-3864. The examiner can normally be reached on 8:00 AM-5:00 PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuong (Tina) Nguyen  
Patent Examiner/Art Unit 2155

/saleh najjar/

Supervisory Patent Examiner, Art Unit 2155